AMENDMENTS TO THE CLAIMS

Please rewrite the claims as follows:

1. (Currently Amended) An exposure method that at least partially immerses, in liquid, a surface of an object to be exposed, and a surface of a projection optical system closest to the object, and projects a repetitive pattern formed on a mask via the projection optical system onto the object, said exposure method forming on a pupil of the projection optical system an effective light source that emits, from an axis orthogonal to an optical axis of the projection optical system, light that is parallel to the line direction of the fine patterns and has an incident angle θ upon the object, wherein the light includes only s-polarized light in an area of an incident angle θ that satisfies ~~$90° - \theta_{NA} \leq \theta \leq \theta_{NA}$~~, $90° - \theta_{NA} = \theta = \theta_{NA}$, where θ_{NA} is the largest value of the incident angel θ.

2. (Original) An exposure method according to claim 1, wherein the area has a canoe shape formed by intersecting two circles.

3. (Original) An exposure method according to claim 1, wherein the area has a shape by linearly cutting down part of a circle.

4. (Original) An exposure method according to claim 1, wherein the area has a shape by linearly cutting down part of an annulus.

5. (Original) An exposure method according to claim 1, wherein the area has a circular shape.

6. (Original) An exposure method that transfers a pattern formed on a mask onto an object to be exposed via a projection optical system that is at least partially immersed in liquid and has a numerical aperture of $n_o \cdot \sin\theta_{NA}$, where n_o is a refractive index of the liquid, said exposure method illuminating exposure light so that where an X-axis is one direction of the pattern formed on the mask and a direction orthogonal to the X-axis, a Y-axis is the other,

and 0 is an incident angle of the exposure light upon the projection optical system, an area of an effective light source formed on a pupil of the projection optical system corresponds to the incident angle 0 that satisfies $90° - \theta_{NA} \leq \theta \leq \theta_{NA}$ and has a linearly polarized component in a direction orthogonal to the X-axis or Y-axis.

7. (Original) An exposure method according to claim 6, wherein the area has a canoe shape formed by intersecting two circles.

8. (Original) An exposure method according to claim 6, wherein the area has a shape by linearly cutting down part of a circle.

9. (Original) An exposure method according to claim 6, wherein the area has a shape by linearly cutting down part of an annulus.

10. (Original) An exposure method according to claim 6, wherein the area has a circular shape.

11. (Original) An exposure method that transfers a pattern formed on a mask onto an object to be exposed via a projection optical system that is at least partially immersed in liquid, said exposure method irradiating only s-polarized light onto an area on an effective light source formed on a pupil of the projection optical system, on which area two imaging exposure beams generate an orthogonal state.

12. (Original) An exposure method according to claim 11, wherein the area has a canoe shape formed by intersecting two circles.

13. (Original) An exposure method according to claim 11, wherein the area has a shape by linearly cutting down part of a circle.

14. (Original) An exposure method according to claim 11, wherein the area has a shape by linearly cutting down part of an annulus.

15. (Original) An exposure method according to claim 11, wherein the area has a circular shape.

16. (Original) An exposure method for transferring a pattern formed on a mask onto an object to be exposed via exposure light having a wavelength λ and a projection optical system that is at least partially immersed in liquid and has a numerical aperture of n_o - $\sin\theta_{NA}$, where n_o is a refractive index of the liquid, wherein the liquid has a thickness d in an optical-axis direction of the projection optical system which satisfies $d \leq 3000 \cdot \lambda \cdot \cos\theta_{NA}$

17. (Original) An exposure method for transferring a pattern formed on a mask onto an object to be exposed via a projection optical system that is at least partially immersed in liquid, wherein a surface of the projection optical system closest to the object contacts the liquid and is protected from the liquid.

18. (Original) An exposure apparatus for transferring a pattern formed on a mask onto an object to be exposed, said exposure apparatus comprising:

a projection optical system that is at least partially immersed in liquid and has a numerical aperture of $n_o \cdot \sin\theta_{NA}$, where n_o is a refractive index of the liquid; and

a polarization control part for controlling polarization on an area on a pupil of said projection optical system which corresponds to a range of an angle θ at which exposure light exits from the projection optical system, the range satisfying $90° - \theta_{NA} \leq \theta \leq \theta_{NA}$, where θ_{NA} is the largest value of the incident angle θ.

19. (Original) An exposure apparatus according to claim 18, wherein the polarization control part sets the polarization to only s-polarized light.

20. (Original) An exposure apparatus according to claim 18, wherein the polarization control part includes a polarization element arranged approximately conjugate to a pupil surface of the projection optical system.

21. (Original) An exposure apparatus according to claim 18, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has an aperture shape that is a canoe shape formed by intersecting two circles.

22. (Original) An exposure apparatus according to claim 18, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has an aperture shape by linearly cutting down part a circle.

23. (Original) An exposure apparatus according to claim 18, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has an aperture shape by linearly cutting down part of an annulus.

24. (Original) An exposure apparatus according to claim 18, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has a circular aperture shape.

25. (Original) An exposure apparatus according to claim 18, wherein the polarization control part maintains contrast of about 0.7 through control.

26. (Original) An exposure apparatus for transferring a pattern formed on a mask onto an object to be exposed, said exposure apparatus comprising:

a projection optical system that is at least partially immersed in liquid; and

a polarization control part for controlling a polarization on an area on a pupil of said projection optical system, on which area two imaging exposure beams generate an orthogonal state.

27. (Original) An exposure apparatus according to claim 26, wherein the polarization control part sets the polarization to only s-polarized light.

28. (Original) An exposure apparatus according to claim 26, wherein the polarization control part includes a polarization element arranged approximately conjugate to a pupil surface of the projection optical system.

29. (Original) An exposure apparatus according to claim 26, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has an aperture shape that is a canoe shape formed by intersecting two circles.

30. (Original) An exposure apparatus according to claim 26, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has an aperture shape by linearly cutting down part of a circle.

31. (Original) An exposure apparatus according to claim 26, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has an aperture shape by linearly cutting down part of an annulus.

32. (Original) An exposure apparatus according to claim 26, wherein the polarization control part includes an aperture stop arranged on a pupil surface of the projection optical system, wherein the aperture stop has a circular aperture shape.

33. (Original) An exposure apparatus according to claim 26, wherein the polarization control part maintains contrast of about 0.7 through control.

34. (Original) An exposure apparatus comprising a projection optical system that transfers a pattern formed on a mask onto an object to be exposed, said exposure apparatus immersing, in liquid, a surface of the object, and a surface of the projection optical system closest to the object, and satisfying $d \leq 3000 \cdot \lambda \cdot \cos\theta_{No}$ where $n_o . \sin\theta_o$ is a numerical aperture of the projection optical system, no is a refractive index of the liquid, λ (nm) is a wavelength of light used for exposure, and d is a thickness of the liquid in an optical-axis direction of the projection optical system.

35. (Original) An exposure apparatus according to claim 34, further comprising a sputtered film, wherein the surface of the projection optical system closest to the object contacts the liquid, and is located on a calcium fluoride substrate and covered with the sputtered film.

36. (Original) A device manufacture method comprising the steps of:

exposing an object using an exposure apparatus; and

developing the object that has been exposed, wherein the exposure apparatus includes:

a projection optical system that is at least partially immersed in liquid and has a numerical aperture of $n_o . \sin\theta_{NA}$, where n_o is a refractive index of the liquid; and

a polarization control part for controlling a polarization on a area on a pupil of said projection optical system which corresponds to a range of an angle θ at which exposure light exits from the projection optical system, the range satisfying $90° - \theta_{NA} \leq \theta \leq \theta_{NA}$, where θ_{NA} is the largest value of the incident angle θ.

37. (Original) A device manufacture method comprising the steps of:

exposing an object using an exposure apparatus; and

developing the object that has been exposed,

wherein the exposure apparatus includes:

a projection optical system that is at least partially immersed in liquid; and

a polarization control part for controlling a polarization on a area on a pupil of said projection optical system, on which area two imaging exposure beams generate an orthogonal state.

38. (Original) A device manufacture method comprising the steps of:

exposing an object using an exposure apparatus; and

developing the object that has been exposed,

wherein the exposure apparatus includes a projection optical system that transfers a pattern formed on a mask onto the object, said exposure apparatus immersing, in liquid, a surface of the object, and a surface of the projection optical system closest to the object, and satisfying $d \leq 3000 \cdot \lambda \cdot \cos\theta_o$ where $n_o \, . \, \sin\theta_o$ is a numerical aperture of the projection optical system, n_o is a refractive index of the liquid, λ (nm) is a wavelength of light used for exposure, and d is a thickness of the liquid in an optical-axis direction of the projection optical system.